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M A C D O N A L D C O L L E G E

Faculty of Agriculture

Theses

Taken in the Agricultural Extension Department, 1915

Contents

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MACDONALD COLLEGE

FACULTY OF AGRICULTURE

THESIS

TITLE: A Study of Rural School Conditions in Quebec in so far as They Affect Agricultural Education, Containing Suggestions as to Improvements in These Conditions, and the Possibility of Introducing a System of Agricultural Education Suitable to this Province by Bringing About Such Improvements.

-- by --

J. Egbert McOuat.

Taken in the

Agricultural Extension Department.

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April 1915
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OUR COUNTRY BOYS AND GIRLS.

Upon their training depends the future of our Dominion.

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INTRODUCTION.

The importance of agricultural education in the public schools of our rural districts was never more appreciated than it is to-day. The Province of Quebec has at last realized that to maintain its rank as a province possessing an efficient educational system it must adopt measures which will place the subject of nature study and agriculture upon a stronger and more permanent basis. The latest movements of our educational authorities have all tended in that direction and many progressive measures have been adopted to see that the subject receives its adequate share of support.

To-day, Macdonald College stands preminently before the people as an institution, which is striving to the best of its ability to help bring agriculture to the fore as a subject in the curriculum of rural schools. This task is a difficult one and no doubt there will be many a struggle and futile endeavor before it is satisfactorily accomplished. This, however, is to be expected when any important reform is being undertaken and courage and patience must be the watchwords of those who believe in the ability of agricultural instruction to improve the efficiency of rural schools. The college authorities, in spite of many discouragements, are still endeavoring to do as much as possible to assist this work and are putting more time and money into their efforts than ever before.

During the spring of 1914 the college decided that to accomplish the greatest good, it would be advisable to obtain a general idea of conditions in rural schools in so far as they related to work of an agricultural nature. By doing so it was hoped that future efforts might be carried out more successfully and with more regard to local needs and conditions.

With this purpose in view, the writer was employed during the summer of 1914 to visit some of the important sections of the province to ascertain what conditions there prevailed, to report upon them, and at the same time furnish suggestions which might be of assistance to the college in carrying on extension work in rural schools. In addition, an opportunity to visit certain sections of Ontario, to observe the nature of the work carried on there and to obtain suggestions which would be of a helpful character in initiating the work locally, was also afforded.

With such a large field of investigation, it was impossible to study conditions very closely, or to even casually visit all the different centres. Because of this several districts had to be omitted from the investigation, while others were not studied nearly as fully as they should have been. It is felt, however, that enough districts were visited to obtain a good idea of the conditions which prevail generally throughout the province, in so far as they affect the subject under consideration.

DIVISION A. INVESTIGATION IN THE PROVINCE OF QUEBEC.

I. PUBLIC ATTITUDE.

It is a pleasure to be able to say that so far as could be determined, the attitude of the people towards this new phase of education is a favorable one. There were of course some scoffers and those who had no use for"agriculture from a book", but these were in the minority. There were very few officials indeed who did not exhibit a great deal of interest in the question when an idea of its possibilities was presented. It is felt that many of these secretaries spoke their minds more f freely to the investigator, owing to his youthful appearance, than they might have done to an official who was higher up in educational circles. This was a fortunate feature, for when a man says what he thinks, it is possible to give the other side of the case and this was generally done; thus some information was usually obtained by both parties. Furthermore, it might be stated that, in a great many cases the secretary has a great deal to do with the success or failure of our schools. Where he is alert and active, school affairs are generally in good condition, or vice versa.

The people of this province are eager and willing not only to welcome any policy which will help to increase the efficiency of their schools but also to give it practical support.

Right here allow us to ask a question. How many times have the policies of improvement suggested by various leaders of

education been followed up by a systematic effort to get out into the country districts and help the people to put such policies into effect? Too many policies have been "black and white" in nature, that is to say, they existed solely upon paper. Such efforts to improve our educational system can never amount to anything. Let us take a leaf from the book of the implement agent, a lesson from the system of the lightning-rod man, and get out among the people. Let us learn conditions at first hand, the trials and difficulties, the local circumstances which differ in every township. Then and only then are we in a position to testify as to the attitude of the people and the remedy needed for existing ills.

The people to-day may not seem quite so favorable towards new policies in school matters as they might be, but if we can show them by a practical demonstration that they are beneficial they will become ardent supporters of the cause.

Proof of this statement is not lacking. In those districts where the demonstrators have been at work the attitude of the people is more favorable than it is in the districts where such work is not yet begun. This is because practical work is being done to prove the benefits of the suggestions made by the farming press and agricultural colleges to the farming public.

When those in charge of educational affairs become more intimately acquainted with conditions and follow up suggestions by actual assistance then can we expect unfavorable attitude to be followed by action, and that of a helpful nature.

Still further proof may be added. When school fair work was begun in this province very little of the funds required were given by school boards. To-day (1917) it is not unusual for the boards to donate practically all the money needed to operate the fair. In brief -- let us meet the farmer on his own ground -- let it be ground with which we are familiar-, and once we have convinced him we appreciate his needs let us proceed to co-operate and help in a practical way. When this is carried out we may expect a critical attitude to be replaced by active co-operation on the part of the rural taxpayer.

II. SCHOOL GROUNDS.

The question of school grounds is naturally one which must receive considerable attention in improving school conditions. A school of unattractive appearance and surrounded by ill-kept grounds is not very likely to attract the children to it or to act as the social centre for the community. It was of course impossible to see all school grounds, even in the districts visited, for one secretary might have as many as 10 or even 26 schools under his control. A great many of the model school grounds, however, were visited, and since they are attended very largely by country children, a knowledge of their condition is important. Very few attempts have been made to improve the school grounds artificially. In some cases they are rather attractive, but this is because Nature has attended to her duty. Too often they are very rough and not even levelled off so that the children can play properly. Scarcely a school had a flower bed or a shrub of artificial planting and a good many had no shade trees. The chances for improvement are very great and much of this might have already been done by a little co-operation among the ratepayers. As will be shown later, money to obtain other than the barest necessities of school life is indeed scarce, and if the grounds are to be improved, much of the stimulus must be provided from outside sources. It is wonderful what an improvement our college could bring about in a great many of these grounds by sending one of the

Huntingville Elementary--Ascot Township.

Suffield Elementary--Ascot Township.

Both these school grounds are not fenced. This is a common difficulty met with in endeavoring to improve school grounds.

staff into these neighborhoods with a few shrubs, vines and tools to spend a couple of days working with his coat off, around these schools. The farmers would soon help for they appreciate a man who talks a little but works a lot. The writer feels satisfied that school ground improvement will only result from co-operation in some such way. No amount of talking or writing upon the advantages of beautiful grounds will ever bring results.

Perhaps one of the best ways to procure the co-operation of the people in the district and the school board as well is to act as follows: A meeting should first be held in the district where the improvement is wished, where the matter should be brought quite frankly before the people for consideration and their views upon the question obtained. If the people wish for an improvement the school board should then be approached and after the matter has been fully explained and they have been informed as to the peoples' wishes they should be asked for a small grant to help purchase shrubs, vines, etc., for the grounds. This is generally given and a short time before the improvements are to be commenced the people should be called together again and a committee formed which should be held responsible for providing men and horses on the day of the "bee". This plan has been tried by the writer and has always brought good results. If one school in each community were to be improved, so as to make it the envy of the others, the

people would soon realize the benefits for themselves. It is often stated that the boys and girls will not refrain from jumping into and otherwise injuring shrubs planted on the grounds, but if the pupils are imbued with the idea that they own these plants and are given a chance to help plant and care for them, very little danger of damage will arise. From experience obtained in such work it is safe to say that the children will take a "personal" interest in every shrub and in so far as they can, guard them from harm.

Methods similar to the above, as well as other ways and means of improving the school grounds, are outlined in the Cornell Reading Course for Farmers' Wives, Series II, No. 6. In this bulletin the teacher is urged to co-operate with the people, to have public meetings in the school which will serve to bring to the attention of the people the poor condition of the grounds and building. It shows methods of decorating both school and grounds in an inexpensive but suitable manner.

Farmers' Bulletin, No. 134 of the U. S. Department of Agriculture tells in detail how the planting of trees on country school grounds should be carried out, while Bulletin No. 585 of the United States Bureau of Education deals very fully and comprehensively with the subject of school improvement in general. It contains ideal plans and illustrations of modern school buildings and supplies much information concerning school surroundings, including grounds and out-houses.

Plenty of room for play. Rural school grounds as large as these are the exception.

Below is given a table of the school grounds visited. It shows their approximate size and condition. Conditions mentioned apply chiefly to, levelness of grounds, freedom from stones and general appearance.

School.	Size of Grounds.	Condition of Grounds.
Danville Academy	2 acres	Attractive, level, lawns in good condition.
Waterloo Academy	10 acres	Attractive, level, in fair condition.
Lachute Academy	2 acres	Very attractive, flower beds, level, much improved.
Richmond Academy	2 acres	Fair, level.
Cookshire Academy	1 1/2 acres	Fairly level, good possibilities.
Hatley Model	2 acres	Fair, level, well shaded.
Beebe Model	2 acres	Fair, level, grounds in good condition.
Bedford Academy	2 acres	Rough looking and bare.
Frelighsburg Model	1/2 acre	Fair, level, well shaded.
Ayers Cliffe Model	2 acres	Fair, level.
Scotstown Model	1 acre	Fair, inclined to be gravelly and rough.
Sawyerville Model	1/2 acre	Fair, level, gravelly.
Clarenceville Model	1/4 acre	Fair, level.
Bishops Crossing Model	1/4 acre	Small, has a hedge around grounds, well shaded.
Bury Model	1 1/2 acres	Rather rough and hilly; abundance of small natural evergreens on grounds; beautiful view.
Dunham Model	1/3 acre	Poor, rocky looking, fairly level.

(Table continued).

School	Size of Grounds.	Condition of Grounds.
Gould Model	3/4 acre	Poor, bare and gravelly.
Marbleton Model	1 1/4 acre	Middling level and smooth.
Kinnear's Mills	1/4 acre	Poor, absolutely unimproved.
Leeds Village	1/2 acre	Poor.
Ulverton Model	1 1/4 acre	Middling.
St. Andrews Model	1 1/2 acres	Middling; level.
Lacolle Model	1/10 acre	Very poor.
Kingsey Consol.	1/2 acre	Very bare; fairly level.
Kingsbury Model	1/4 acre	Very rough; hilly.
Dixville	1/4 acre	Very bare, fairly level.
Rougemont	1/4 acre	Very bare.
Grenville Village	1/8 acre	Very poor.
East End (Lachute)	1/4 acre	Very poor; level.
Genoa	1/8 acre	Very poor; rough.

It can easily be seen from this table that the need for improvement is very great while schools in the more backward districts are in still more need of attention.

In some cases it would be almost impossible to produce a smooth and level playground. Under circumstances like this it would be better to plant enough hardy shrubs in the corners of the grounds and around the school to brighten up the general appearance of the place and cause it to lose its neglected appearance. Many grounds may be beyond the possibility of

becoming ideal but none need be beyond improvement.

Herewith is given a list of shrubs and perennials which might be planted upon an average sized school ground and which at a moderate cost would effect a great improvement. The varieties mentioned are those which have been found to do best upon the grounds already improved by the writer.

I. FOR DECORATING GROUNDS OF ORDINARY RURAL SCHOOLS.

Quantity.	Variety of Shrub or Perennial.	Value.
8	Spirea Van Houttei.....	$ .96
8	Lonicera tartarica rosea.....	1.12
10	Rosa rugosa alba.....	1.40
5	Dogwoods (Cornus alba siberica).....	.65
4	Mock Orange (Philadelphus).....	.44
5	Siberian pea trees (caragana arborescens	.65
	PERENNIALS.	
5	Golden glow (rudbeckia laciniata plena)	. 35
5	Aquilegia caerulea.....	.40
5	Larkspur or Delphinium.....	.75
5	Paeonies.....	1.00
5	Phlox paniculata.....	.50
5	Iris.....	.35
5	Digitalis gloxinaeflora.....	.40
	Total approximate cost.....	$8.97

Bulbs blooming for the first time on a country school ground in Sherbrooke county. The children think they are wonderful things.

After shrubbery is planted, it must be given some care.

In this province it is generally an easy matter to supply any trees needed for decoration from nearby woods. These can thus be supplied without cost to the school board. From experience it has been determined that in many cases it is better to omit perennial flowers in the decorations of small rural schools for they are much more likely to suffer in case of neglect than the hardy shrubs. Besides, the grounds are as a rule very small and the children while playing are likely to injure such tender plants. It is also a good plan to place tall poles or stakes around groups of shrubs so that they will not be injured by teams which may be driven inside the grounds when the shrubs are young and small, and not easily visible, or in the winter, when they are covered with snow.

II. FOR DECORATING LARGER GROUNDS OF SCHOOLS SUCH AS MODEL SCHOOLS AND ACADEMIES.

Quantity	Variety of Shrub or Perennial	Value.
10	Spirea Van Houttei.....	$1.20
8	Mock Orange (Philadelphus).....	1.12
12	Siberian pea tree (caragana arborescens	1.32
10	Rosa rugosa alba.....	1.40
8	Golden elders (nigra aurea).....	1.28
5	Lonicera tartarica rosea.....	.70
5	Syringa alba grandiflora.....	1.00
5	Symphoricarpus racemosus.....	.70
5	Hydrangea paniculata grandiflora.....	.70

(Table continued)

Quantity	Variety of Shrub or Perennial	Value.
	PERENNIALS.	
7	Golden glow (rudbeckia lacianaha plana)	$ .49
7	Aquilegia caerulea.....	.56
5	Asters.....	.60
7	Dianthus barbatus.....	.56
5	Anchusa Italica.....	.50
8	Phlox subulata.....	.56
5	Paeonies.....	1.00
5	Delphinium.....	.75
5	Hollyhocks.....	.45
5	Iris.....	.35
5	Achilla ptarmica plena.....	.40
	Total approximate cost.....	$15.65

These lists are not given as being an ideal planting for any particular school ground, for the local surroundings must determine to some extent the planting of the grounds. They serve to show approximately, however, suitable varieties and approximate quantities and cost of same. If a grant of ten dollars can be obtained from a rural school board and one of fifteen dollars from a superior school board it can be safely stated that they are at least paying for the cost of the material used on the grounds. If the community supplies

the labour it would seem a fair proposition for those interested in the work to assume the rest of the responsibility and charges.

It has been found that school boards are, as a rule, ready to vote the amounts mentioned if the matter is put clearly before them in the manner previously described.

So little work has been done on school grounds in the province that few facts are available which would serve to provide further information on this topic but it is hoped that the information furnished herewith, which was for the greater part obtained at first hand, will be of some assistance in solving this important question.

III. SCHOOL GARDENS.

The natural place to discuss the question of school gardens is in connection with that of school grounds. The value of school gardens and the possibility of operating them efficiently in this province is discussed elsewhere, this section dealing chiefly with the condition of the gardens as found in this province. The task of recording the number of school gardens seen during the summer was indeed a light one, the quest for them almost proving in vain.

Strange to say, almost the first secretary visited, Mr. George Hall of Brome municipality, had a story to relate of school gardens once established in his district but now almost a forgotten event of the past. These gardens were established with the aid of the Macdonald garden fund several years ago at Iron Hill, West Brome and Brome. Difficulty in obtaining and retaining qualified teachers who were able and willing to assume the garden work, and the instruction of the children, soon brought the efforts of the school board to naught and the gardens ceased to be operated. At Iron Hill there is a specially beautiful spot for a garden and small demonstration orchard, and it is a pity that this work was compelled to cease. The secretary was enthusiastic and asked for our co-operation in renewing this work in their schools.

At Knowlton and Lachute there were formerly school gardens but similar conditions closed them also. In Richmond the school garden was closed because it was not considered a success, the secretary, Mr. Cleveland, being emphatic in declaring that the board did not wish it back again. The reasons given were that the scholars in the academy had enough to do in the spring with the pressure of examinations upon them, and that after school closed the garden either fell into neglect or had to be taken care of by the janitor. These reasons would likely apply to many other cases, were an effort to operate gardens made in the large schools.

The only place visited where an attempt was being made to run a garden of ordinary size was at Bulwer Consolidated School, where four schools have been united into one. When seen on July 14th, it seemed to be suffering from neglect and was no great tribute to school gardening in general.

It is not surprising, of course, that so few gardens exist, for very little attention has been given to this type of school work by our educational authorities nor has there been a demand for them by the people themselves.

This is but natural if we consider the true purpose of a school garden which is that of amplifying and illustrating the lessons on agriculture given in the school. Since little agriculture has been taught the number of gardens is logically bound to be small.

The table given in connection with school grounds shows that at most of the larger schools at least, there is ample space to have school gardens planted and operated if a teacher can be hired who is able and willing to undertake the work. It is felt, however, that in the smaller schools there is very little probability of school gardens being a success even if they were started, because very few teachers in charge at the present time are capable of teaching the subject of agriculture, and thus could not bring a school garden to a high state of efficiency. This statement is shown to be true by the comments made in this article on the ability of the teachers at present in charge of our elementary schools. Besides, our school grounds as a rule are so rough and uncared for that it would be next to impossible to establish a school garden successfully even were the teacher willing and capable.

School gardens cannot be a success where we find short term schools, rough grounds and a lack of interested teachers capable of teaching the subject.

IV. LIBRARIES.

The importance of a good library, especially in a rural school, cannot be overestimated. Yet this is one of the features in which our schools are as a rule decidedly weak, and where great improvement is needed.

This statement will elicit no expressions of surprise from those who are familiar with the needs of our public schools. Men, well versed in every detail of school work, realize this and are doing their utmost to build up the libraries of our public schools. A library to be efficient and up-to-date requires constant additions and yearly outlays. The inspector knows how difficult it is in a great many cases to obtain the barest necessities of school equipment, let alone the installation of a library. The reasons for this condition of affairs will appear later on when the question of valuation and taxation is considered.

An attempt was made to ascertain the condition of the libraries in many of the schools and also to find out whether travelling libraries, composed especially to suit country conditions, would be appreciated. The answers to the latter question were, on the whole, decidedly in favor of travelling libraries, this being especially true in the country districts. There is no doubt whatever that the travelling library can, by proper methods, be made to serve a very useful purpose in forwarding the literary tastes and desires, not only of our school children, but also of the parents of these children.

It was surprising that such a large number of schools, particularly rural ones, had no library. The following list will give some idea of the situation as regards libraries in our schools. The number after the name in the rural school list indicates the number of schools in the district or municipality.

ACADEMY		MODEL SCHOOL		RURAL SCHOOL	
Cowansville	Yes	Frelighsburg	Yes	Brome M. (18)	None
Bedford	Yes	Dunham	?	West Bolton (9)	Some
Cookshire	Yes	Sawyerville	Yes	Bulwer Consol.	None
Richmond	Yes	Scotstown	Yes	Eaton M. (10)	None
Danville	Yes	Gould	Yes	Grenville Vil.	None
Shawville	Yes	Marbleton	Yes	Clarenceville M. (5)	None
Waterloo	Yes	Bishops Crossing	Yes	Rougemont	None
Lachute	Yes	Kinnear's Mills	?	Abbotsford	Yes
		Leeds Village	Yes	L'Avenir	Npne
		Ulverton	Yes	Kingsbury	None
		Ayers Cliffe	Yes	Cleveland (8)	None
		St. Andrews	Yes	Danville D. (10)	Some
		Clarenceville	Yes	Hatley D. (7)	Yes
		Lacolle	Yes	Smiths Mills(26)	None
		Kingsey Consol.	Yes	Compton Village	None
		Hatley	Yes	Barnston D. (11)	1
		Kingsey Model	None		
		Beebe	Yes		

The above table shows that the rural schools are badly in need of help along literary lines. Under rural schools are placed all elementary sch ools but practically all the Model schools in this list cater largely to children from rural homes so that they can also be termed rural in nature.

The situation, however, is not even so hopeful as would appear from the table for a great many of these libraries are only nominal and are not really efficient as regards either quality or quantity. The Department of Public Instruction has done much to put books into the schools and these have helped considerably to relieve the situation. It is certain, however, that even where there are libraries there is no special attempt made to have them suited to rural needs, and there is no agricultural tendency in their contents.

Some plan whereby the college and the Department of Public Instruction can co-operate in their efforts to improve these libraries is greatly needed. If an "agricultural bookshelf", such as is placed in Ontario schools by the educational authorities of that province, could be established in our country schools through the aid of the college and the department, a progressive step would have been taken. Even a small library of thirty to forty volumes, composed of books of a helpful and practical nature, would produce good results.

One very essential feature of a library of this nature would be that some of the books in it be written in such a way as to appeal to the average farmer, who may require information along agricultural lines. Too often the books placed in the library of this nature are too scientific and exhaustive to be popular, and as a result render the library of very little use to the community. There are many books written on the subject

of agriculture which, although seemingly very elementary in character, are in truth of more real value in revealing the essential truths of agriculture to the ordinary mind than the more scientific type.

The establishing of such libraries, in at least the larger rural schools, would mark the beginning of the formation of the school as a social centre, an institution which is almost entirely absent in our rural communities. It is the lack of such centres which is helping to deplete our country districts so rapidily of ~~its~~ their inhabitants, therefore every possible effort should be made to bring the people together and cause them to feel that the life they have chosen to lead is that of a dignified and worthy profession.

The college might also assist the efficiency of these libraries by sending to the school from time to time all the latest popular bulletins, not only of its own publication, but those of other colleges and institutions. The placing of a copy of the Journal of Agriculture in every rural school ought to be of great value in this work since the articles are so applicable to the needs of the farmers of this province.

A pamphlet recently published by the Department of Public Instruction* gives a list of sets of books which are suitable for libraries in rural schools. The titles of the books in each of the twenty-five sets are given, and each set costs about ten dollars. If school boards would buy one of these sets every year they would soon be in possession of a good

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* Dept. of Public Instruction, Quebec. Lists of Books for Protestant School Libraries.

library. To quote from the pamphlet:- "They represent many lines of interest and instruction, including history, biography, travel, art, poetry, science, folk lore, fiction and so forth. The selection has been made with great care, and with the view of forming good reading tastes and habits." If the authorities would bring this matter prominently before school boards undoubtedly many good books would be added to school libraries.

It has been suggested that the college distribute bulletins, circulars and charts of a helpful nature. Herewith is given an outline of literature distributed to Ontario schools by the Ontario Department of Education through the Director of Elementary Agricultural Instruction.

CIRCULARS AND CHARTS.

	1908....Improvement of School Grounds.
	1909....Plans for Rural School Buildings.
Circular 47,	1907....Equipment for Agricultural Departments in High Schools.
Circular 47 1/2	1911....Regulations and Courses of Study for High School Agricultural Departments under District Representatives.
Circular 13,	1913....Regulations Relating to Elementary Agriculture and Horticulture and School Gardens.
Circular 13A,	1912....Childrens Gardening. (For Pupils).
Circular 13B,	1913....Spring and Summer Courses for Teachers at the Ontario Agricultural College, Guelph.
Circular 13D,	1912....Alfalfa or Lucerne. (For Pupils).
Chart No. 1	1912....Alfalfa or Lucerne.
Circular 13E,	1912....On the Best Time to Sow Spring Grains. (For Pupils).
Chart No. 2,	1912....On the Best Time to Sow Spring Grains.
Circular 13M,	1913....Rural Education Conference and Inspectors Short Course, O. A. C.
Circular 13N,	1913....High School Science Teachers' Course in Agriculture, O. A. C.

Circular 13 (1) 1913....Regulations, Course of Study, etc., relating to Agriculture and Horticulture in High and Continuation Schools.

AGRICULTURAL EDUCATIONAL BULLETINS

No. 1 (13G) Jan. 1913....The Story of an Ontario School Garden.
No. 2 (13F) Jan. 1913....Agriculture in the Schools of Ontario.
No. 3 (13H) Feb. 1913....Suggestions and Helps for Teaching Agriculture and Carrying on School Gardening.
No. 4 (13I) Mar. 1913....The Dominion Agricultural Instruction Act.
No. 5 (13J) Mar. 1913....The Carleton County Potato-Growing Contest, 1912.
No. 6 (13K) Apr. 1913....School Improvement and Arbor Day.
No. 7 (13L) May 1913....Signs of Progress in 1913.
No. 8 (13O) June 1913....Nature Collections for Schools.
No. 9 (13P) Dec. 1913....Rural Education Conferences, 1913.
No. 10 (13Q) June 1914....Progress of Agriculture Teaching in Ontario.

INSTRUCTION SHEETS.

In addition to the circulars, bulletins, and charts, listed above, the Schools' Division of the Experimental Union sends Instruction Sheets with the planting material sent out for school gardening purposes. Those printed up to the present time deal with school experiments on vegetables and field crops and with the organization of Girls' Canning Clubs and Boys' Corn and Potato Clubs. Additional copies of these are sent free for pupils' use.

LOAN LIBRARY.

Arrangements are being made whereby teachers, trustees and others interested in the problems of rural life and eduaction may secure loans of books, bulletins and magazine articles relating to such matters as Consolidation, School Ground Improvement, School Decoration, Medical Inspection, School Fairs, Play and Play Equipment, Children's School Clubs, Parents' and Teachers' Associations, School Improvement Associations, Rural Problems and the Schools' Relation Therto, The Problem of the Rural Church, Rural Economics, Progress of Agricultural Education in Other Countries.

Sets of lantern slides dealing with the work of the Rural School will be available also for loaning to Teachers' Associations, Womens' Institutes, Farmers' Clubs, and similar organizations.

Address the Director of Elementary Agricultural Education, Ontario Agricultural College, Guelph.

The contents of this table show that a great deal is being done in Ontario to furnish information to rural schools upon many valuable topics. Any teacher in possession of average ability and a spirit of progressiveness should be enabled to carry on a great deal of useful work, aided by such complete instructions. It is to be hoped that the college will soon see its way clear to act in a similar way by having some helpful bulletins prepared and distributed in the rural schools.

V. SCHOOL CLUBS.

Since so little agricultural work has been carried on in our rural schools we find no formally organized clubs in this province, which have for their purpose the training of boys and girls along agricultural lines. What work has been done has chiefly been accomplished through the medium of the school fair. Since these are of recent origin, most of the work of organization is still left to the demonstrators.

In a short time, when boys and girls have become better acquainted with such work, more attention should be paid to the forming of clubs for various purposes. These clubs will give the pupils a new interest in the work of the farm, help to link up the work of the school with the home, give the boys and girls a chance to earn prestige in the neighborhood, win prize money, and help to create in them a spirit of independence.

The state of Massachusetts has developed its club work very rapidly because of the ready response which the boys and girls give to the appeal made by the Massachusetts Agricultural College when the work was first begun by that institution in 1908. The potato club was the original and simple enterprise of the boys and girls clubs. A club was formed and instead of a small number joining as was expected, over 600 members enrolled. The work grew rapidly and in 1915, 315 towns with a membership of 50,000 children were taking part in home and school gardening.

Some of the clubs now formed in that state are as follows:

1. Home and school-garden clubs.
2. Corn Clubs.
3. Potato Club.
4. Model Garden Club.
5. Poultry Club.
6. Hay Club.
7. Pig Club.
8. Home Economics Club.
9. Canning and Marketing Club.

The state club is made up of a large number of local clubs but all members of these clubs must follow the same rules and regulations. In this way uniformity of results is assured. All pupils taking part in the work of these clubs must send from time to time regular reports on the results they obtain.

Very valuable "state" prizes are given to those members who win in the atate competition. In the Canning and Marketing Club competition the following prizes are offered:

1st prize---Trip to Washington or equivalent.

2nd prize---Trip to point of interest in New England.

3rd prize---A week at the Agricultural College, Amherst, Mass.

The work owes much of its success to hearty co-operation on the part of teachers, the state board of agriculture, the county bureaus, improvement leagues and the United States Department of Agriculture, with the Massachusetts Agricultural College, which

institution is the leader in the work. The report of the work of the boys and girls clubs in that state is certainly a helpful booklet* and many valuable hints and suggestions are contained therein.

In Ontario the name given to most of the clubs is the "Progress Club". These clubs may be found with only one project in view---perhaps the canning of fruit and vegetables or else the growing of corn. On the other hand the members may undertake several lines of work if they have the time and the necessary instruction.

The purpose** of these clubs is outlined in the following terms:

"Progress Clubs in the Country Schools of Ontario may bring many benefits. As the title suggests, they may stir the imagination towards the attainment of better things; they may foster ideals that will find expression in action. Dealing with useful, practical matters, they may lead to a higher regard of the value of an education, not only in the minds of the pupils, but in the minds of parents also. They will afford pupils good training in co-operative undertakings, business enterprise and public speaking---three things that will make for better rural citizenship. To the teacher, they will bring relaxation in the humdrum of school work, the means of getting acquainted with his or her pupils outside of the school, and the opportunity to develop a local "community spirit" around the school".

These clubs are not so highly organized as in Massachusetts and the work done by the club depends very much upon local circumstances. The variety of the work they may undertake is shown by the following synopsis of suggestions:**

* * * * * * *

*Second Annual Report on Boys' and Girls' Club work, 1915.
** Progress Clubs for Ontario Schools, 1913.

Suggestions for Club Work,- There are many different lines of work that the club might follow. Some of these are suggested below.

1. It might procure select seed from the Schools' Division of the Experimental Union and carry out a line of work under its instructions. One year it might undertake work with potatoes, another year with oats, another with corn, another with alfalfa and so on.

2. It might take up the work outlined for the schools by the local Agricultural Representative.

3. It might arrange and put into effect, plans for the improvement of the school and the school grounds, such as repairing the fences and gates, levelling the boulevard on the roadside, tidying up the lawn, clearing out the weeds, sodding or seeding bare patches, filling in hollows, planting vines and shrubbery around the outhouses.

4. It might conduct a few simple and interesting experiments in a small school garden and arrange for the proper care of the plots through the holidays.

5. It might conduct a School Fair in September or October , at which the products of the home plots are shown.

6. It might arrange for a school exhibit at the local Agricultural Socirty's Fall Fair.

7. It might hold one of its meetings some Friday afternoon and invite the public, or it might arrange for some one in the locality to give an address.

8. It might arrange for an excursion of its members (1) to the home plots of the members, (2) to some of the fine farms or farm buildings of the neighborhood, (3) or to the Agricultural College in June.

9. It might carry out plans to secure agricultural books for the school library, pictures for the walls, tools for garden use, or a lawn mower for the school lawn.

10. It might arrange for the purchase of club badges or pins to be worn by the members.

As mentioned elsewhere in this thesis, the Ontario authorities provide much useful literature to help the pupils in their work. If they wish to take up the growing of corn as a project, full information* is available as to how this work should be taken up.

It has been proved beyond a doubt that such clubs can be made a success in many parts of the country and there is every reason to believe that the boys and girls in our own schools would take an active part in club activities if they were asked to do so. There is so little of interest found on the ordinary farm that all the natural instincts of the child towards activity are forced to follow along the line of hard work and plenty of it. Clubs such as these will help to provide some project for the boy and girl outside of the ordinary work and will cause them to feel more contented.

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* Corn Clubs for Ontario, 1913, Instruction Sheet No. 6.

VI. VALUATION AND TAXATION.

The possibility of a high standard of education being maintained depends largely upon the valuation of the real estate in the district and the revenue resulting therefrom. The task of maintaining good schools in the rural communities is yearly becoming more difficult, and the following pages endeavor to show some of the reasons for this statement.

Education in the Province of Quebec is made more expensive by a system of separate schools, thus the Protestant goes to his school -- the Roman Catholic to his, the result being that two schools are maintained in most localities instead of one.

In a community where the population is evenly divided, each division may have good schools and be well satisfied. What happens, however, when the English side of the population begins to decrease, is well known to all. Since there are fewer farmers, and thus fewer taxpayers, these are compelled, if they wish to maintain an equally good school, to tax themselves more severely. Soon these taxes become burdensome and some of the poorer or less interested farmers begin to agitate for a lowering of taxes. This agitation very often occurs and results in a poor school in charge of an unqualified teacher. In time this discourages the more progressive farmer who wishes to see his children well educated. He quite likely sells his farm and goes to the nearest town or else out West to try his fortune on the prairies, where

every square mile of settled country has its school managed by a well-paid teacher.

If this farmer had sold his property to a Protestant the level of taxation would have been maintained. In nearly every case, however, the sale is made to a Roman Catholic rate-payer, who, of course, pays his taxes into the Roman Catholic panel. Nearly every secretary mentioned this practice and could show without much difficulty that very many of the Protestant elementary schools of this province are in danger of extinction unless some wise and practical precautions are taken to induce the English population to remain. In some localities where there were half a dozen schools some years ago, the number has decreased to one or two. This is especially true of the section of country in the vicinity of Rawdon. In the Township of Hampden two out of five schools are closed. Two of the seven elementary schools near Leeds Village are closed, while even in strong Protestant sections, such as Lachute, some schools have ceased to be operated while others only run irregularly.

In the larger centres, where there is a large number of ratepayers paying into the same treasury, the problem of maintaining good schools is not so serious, nor the burden so heavy. From what has been written, however, one can see what an uphill struggle it must be in many of these country districts to find the funds necessary to run a good elementary school.

The following table shows the valuation in several

rural municipalities, the number of schools run on each valuation, the rate of taxation, the average amount each school receives from the taxes levied and the average salary of the teacher employed:-

Municipality.	No. of Schools.	Valuation.	Rate.	Amount per School.	Aver. Salary.
Brome.....	18	$798,955	$ .40	$177.50	$236.
Bolton West.....	9	270,434	.50	150.24	196.
Eaton.....	10	454,689	.60	272.81	273.
Grenville No. 1 .	8	162,755	2.00	362.00	290.
Grenville Village	1	37,625	1.00	376.00	300.
Clarenceville.....	5	258,000	.70	361.20	280.
Rougemont.....	1	67,000	.38	254.60	320.
Abbotsford.....	1	59,956	.65	378.71	350.
L'Avenir.....	1	60,000	.40	240.00	300.
Kingsey Consol. ..	1	48,265	1.00	482.65	800.(2)
Kingsbury.....	1	73,000	.90	657.00	840.(2)
Cleveland.....	8	213,000	.80	213.00	300.
Smith's Mills.....	26	860,000	.80	264.00	300.
Compton Village...	1	45,000	.60	270.00	500.
Barnston.....	11	500,000	.70	350.00	300-400.
Bristol.....	9	500,000	.70	350.00	250-400.
St. Jerusalem.....	5	231,585	.60	278.90	305.

The above table deals almost exclusively with elementary school valuation. It can be seen from these figures that the

rate of taxation is, on the average quite high, but we must notice that since the valuation is very often so small owing to conditions previously outlined, that the funds obtained from the taxation are notnvery large. The country ratepayer is often criticised for not paying high enough taxes, but this criticism is not justified in many cases, for the rural rate compares very favorably with that levied in the towns and villages supporting the academies or model schools. A tax of such a character as 70¢ to 90¢ on the $100 is more burdensome to most farmers than it is to many of our people in the towns, who have steady or fixed incomes, and where the number of those paying into the treasury is larger.

Another fact shown by the above table is that in many cases the average amount received per school from taxes is either smaller than, or only equal to, the salary paid the teacher. The equipment of the school and the running expenses, in addition to repairs, must then be paid out of school fees, special taxes, and the grants which the Government gives to encourage school boards situated in the poor districts of the province.

VII. TEACHERS' AND SALARIES.

This question is receiving much attention at present because of the great difficulty in obtaining an adequate supply of properly trained teachers for our rural schools. The situation is much worse than it was several years ago and the outlook is anything but bright. There are 771 elementary schools in this province, with 16,230 scholars in attendance, exclusive of the cities of Montreal, Quebec, Westmount and Maisonneuve*.

In the school year of 1914-1915 we find that a great many of our schools were in charge of unqualified teachers. The figures given herewith will serve to show that the situation is far from satisfactory.

QUALIFICATIONS OF TEACHERS.

INSPECTORS.	Macdonald College.	Lachute Summer School.	Unqualified.
Insp. J. H. Hunter....	14	15	49
Insp. O. F. McCutcheon	6	10	39
Insp. L. Gilman.....	57	14	7
Insp. H. A. Honeyman..	20	8	63
Insp. E. M. Taylor....	10	13	14
Insp. J. M. Sutherland	6	4	16
Insp. W. B. Rothney...	26	18	2
Insp. J. W. McOuat....	19	17	33
Insp. G. N. Kerr.....	10	5	21
Total	168	104	244

* * * * * * * *

* Province of Quebec Bureau of Statistics. Statistical Year Book for 1915.

These figures show us that 244 of our schools or almost one-third of the total number are taught by unqualified teachers who have received no professional training, while 104 are in charge of teachers with some training but no teaching practice, obtained under direct supervision.

It seems hard to account for this condition when we know that the average salary has risen considerably during the last decade. A glance at the table on valuation indicates that the average salary is slightly over thirty dollars per month.

This salary is high enough when we consider that it is very often paid to unqualified teachers. It has been stated that unqualified teachers are not paid such high salaries as those qualified, but teachers of any kind are so scarce to-day in many districts that the school boards pay the same salary to any teacher they can procure regardless of her training.

It is well to agitate for higher salaries but we must not forget that if this is done the qualified teachers must be furnished who deserve such wages. To-day if a school board offers a good salary the applications received are almost as likely to be from unqualified as from qualified teachers.

We must reach the conclusion that there is not an adequate supply of trained teachers to be had and we should enquire into the reasons for these conditions.

One of the greatest reasons, it must be admitted,

is that the salaries paid are not large enough, but, as has been pointed out, even if the salaries offered are high, there are not enough teachers to supply the demand.

Every year a large class of teachers graduates from Macdonald College and yet after eight of these have completed their studies we only find 168 Macdonald teachers in the elementary schools. What are the reasons? Some have married, others have taken up other professions, while some have gone West. A great many, however, are teaching in this province but not in the rural schools.

The city of Montreal, owing to its recent rapid growth, is making greater demands every year upon the supply of trained teachers from Macdonald College. The commissioners of that city employ a great many teachers. In the year 1913-14 there were 613 teachers in the elementary schools of Montreal.* A city which employs such a large staff is bound to obtain a large yearly supply of teachers and such is found to be the case. In the spring of 1914 no less than 66 Macdonald teachers who had just graduated were employed by the commissioners and 17 other graduates of the same institution were also added to the staff.** In the spring of 1915, 55 graduates of the

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* Report of the Protestant Board of School Commissioners of the City of Montreal for the Year ending Sept. 30, 1914.

** Same as above.

year 1915 were engaged as teachers.

The salary paid by the board is high, starting at $650 per year and rising annually to $950 in some of the higher grades.

This high salary coupled with the attractions of city life is bound to attract our new teachers and as a result we find them teaching in large numbers in the city of Montreal.

Is it to be wondered at, that so few Macdonald teachers are found in the rural school districts?

We must as a result of the information given in the preceding paragraphs conclude that the greater part of our trained teachers from Macdonald is employed by the city of Montreal and by the model schools and academies of the province.

Of what avail then, are our efforts to supply our country schools with good teachers? The services of skilled instructors in nature study and agriculture are brought practically to naught, for those who receive such instruction are not as a rule going to teach in schools where it would be very valuable to the pupils.

One of the main objects in removing the School for Teachers to Macdonald College was to place the students in closer touch with rural surroundings, to give them the advantages of all the agricultural instruction which the course would allow, and to render them better fitted for rural school work.

In the main it cannot be said that this object has been accomplished for the place which they should occupy in our rural

schools is being taken in a great many cases by unqualified teachers.

This renders progress in agricultural instruction exceedingly difficult and also lowers the efficiency of the school in many other ways.

The problem is indeed a hard one to solve and the only solution seems to lie in the payment of higher salaries. As a rule, however, the very districts which employ the poorest teachers are the least able to pay higher taxes.

Two factors only can help such municipalities in many cases, first, increased government aid and secondly, consolidation, to which considerable attention is given in the next section.

VIII. CONSOLIDATION.

The question of consolidation is one which has received a great deal of attention during the last twenty-five years. It is a problem which is particularly important because it affects the welfare of the majority of the children in the Dominion -- those who attend country schools. It is a question of placing in our municipalities the most efficient system of education available and catering to the best interests of our rural population.

The system of consolidation originated in Massachusetts in 1869 and is now in force in 32 states of the union. In Indiana 1000 small districts have been abandoned and their place taken by about 600 consolidated schools. In the other states we find the following number of consolidations*:

Illinois.....	13	Oklahoma.....	86
Minnesota.....	130	Virginia.....	100
Kansas.....	75	Louisiana.....	250
Washington.....	120	Ohio.....	350
Idaho.....	20	Iowa.....	60

For various reasons, the most of them logical, the spread of consolidation has been slow in Canada, especially in the older eastern provinces. In the west, however, especially

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* Special Report on Consolidation, (Manitoba) 1912.

in Manitoba, the growth of the movement has been much more marked. In that province the first consolidations, two in number, were effected in 1906 but progress has been rapid since that date for in 1914 59 consolidations had been effected.*

A system which has made such rapid strides ought to have many features which commend it very strongly to educational authorities, and we find that this is true.

The following are some of the advantages summarized in a pamphlet issued by the Department of Public Instruction, Quebec:**

Consolidation.

1. Permits a better grading and classification of the pupils.
2. Ensures more weeks of schooling.
3. Makes for a larger average attendance.
4. Leads to better school buildings, better equipment, a larger supply of books, charts, maps and apparatus.
5. Quickens public interest in the school.
6. Gives an opportunity for more practical instruction.
7. Affords a community centre for the people.
8. Means very little extra expense.

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* Report of the Department of Education (Manitoba) 1914.

** Protestant Schools in the Eastern Townships, 1913.

9. Brings the pupils to school in rough winter weather a distance of four or five miles, when it might be impossible for them to walk a mile.
10. It is better for the health of the pupils.
11. Gains the approval of the people wherever and whenever it is given a trial.
12. Suits our rural conditions.

Any system which possesses the above advantages is worthy of most serious consideration, and a brief study of conditions in this province should help us to form clear ideas upon the matter. The following pages are used to show approximately what these conditions are, whether consolidation is needed and whether it would be practical to endeavor to encourage this system.

The figures herewith submitted show us first of all that very many of our elementary schools have a very small attendance -- too small to permit of their doing good work or hiring a really good teacher and therefore it would be to their benefit if they could be linked up with some other school.

TABLE I.

Figures obtained from inspectors relative to attendance at small schools.

Inspector.	Schools having 10-15 pupils	Schools having less than 10 pupils
Insp. J. H. Hunter.....	44	34
Insp. O. F. McCutcheon...	25	44
Insp. L. Gilman.....	20	10
Insp. H. A. Honeyman.....	33	29
Insp. E. M. Taylor.....	36	29
Insp. J. M. Sutherland...	11	8
Insp. W. O. Rothney.....	27	31
Insp. J. W. McOuat.....	27	25
Insp. I. N. Kerr.....	10	6
Total.....	233	216

These figures are indeed alarming. They show that a total of 449 schools have 15 pupils or less in attendance, this number being considerably over one-half of the total number of elementary schools in the province. They show the great need of consolidation and at the same time show us that it is difficult to bring this about because of the much scattered population.

A COMMON TRAGEDY IN OUR ENGLISH DISTRICTS.

Act I.-- Total attendance, seven pupils.

Act II.-- Later. A closed school.

Remedy in many cases--Consolidation.

TABLE II.

Figures from pamphlet: Protestant Schools in the Eastern Townships. (Quebec) 1913.

Municipality.	No. of schools	Attendance at each school.
No. 1	13	14-5-9-11-9-9-13-9-9-7-17-9-14
No. 2	14	19-10-12-8-11-4-10-8-9-12-11-9 6-34.
No. 3	18	15-15-6-9-13-6-17-6-15-9-8-8-12 7-21-18-8-10.
No. 4	26	9-8-8-11-9-15-7-5-11-4-26-26-12 8-11-22-10-9-20-3-23-8-7-10-6-27.

These figures give further proof, if any be needed, of the small attendance in our schools, for we find that in the 71 schools enumerated no less than 58 have an attendance of 15 pupils or less.

This pamphlet further states: "But when they (the inspectors) were making their rounds, there were 320 schools open. The first fact we have to notice is that in these 320 schools there were on the days of inspection a total of 3,644 pupils, or an average of a little over 11 pupils per school. These figures do not give the total number of rural elementary schools in the Eastern Townships or the total number of pupils, as on the occasion of this visit many of the "summer schools" had closed and some of the winter schools had not opened. However, they indicate rather accurately the average attendance at our rural schools."

The question of teachers has been dealt with elsewhere, but it should be pointed out that unqualified teachers and small schools seem to go hand in hand, for of these 320 schools 45% were in charge of teachers with no legal qualification, while 56% had no normal school training.

Had the figures in the two previous tables been procured more recently they would undoubtedly show a further decrease in the attendance at many of these schools, thus making the situation still more critical. These figures must surely dispel from our minds any doubt as to the situation in general as it exists in the province of Quebec, and indicate the need of consolidation to be indeed a pressing one.

Before proceeding to discuss the possibility and practicability of consolidation as a remedy for such conditions, it is advisable that some idea should be procured of the attendance at the model schools throughout the province. If the attendance is small, this fact provides an additional reason why consolidation should be adopted, for in that case, many elementary schools requiring better conditions may be brought in and consolidated with such model schools, thus strengthening their efficiency in such ways as are mentioned on page 40 .

Table III shows the total attendance at many of our Model schools. In most cases consolidation would undoubtedly be of benefit were it possible to effect it.

TABLE III.

Model School.	Attendance.
Gould	41
Marbleton	45
Kinnear's Mills	20
Lacolle	35
Dixville	60
Ulverton	40
St. Andrews	42
Ayers Cliff	75
Hatley	68
Clarenceville	72
Kingsey Consolidated	24
Dunham	50
Bulwer	53
Bishops Crossing	68

It has been shown beyond a doubt that we are in need of consolidation. The next question which must be considered is whether it is practical and possible to bring this about.

The attitude of the public is changing somewhat slowly in favor of consolidation but it is still quite often antagonistic and not nearly so favorable as might be expected.

There are various reasons for this feeling, but as a rule three main objections are set forth.

In the first place the people feel when a movement is begun to effect consolidation which will include their own little school that they are suffering a great loss by its removal from the community. It does not matter to them how poor the school is with regard to equipment, light or heating. It does not concern them whether the teacher employed has been good, bad or indifferent. Only one thing stands out prominently before them, and it is the fact that they are losing the school. As a result of this they fear their property will depreciate in value and their children lose all chance of obtaining an education.

In the second place, the farmer cannot, as a rule, agree with those agitating consolidation, upon the question of transportation, and very often his views on the question are quite sound, because they are based on an intimate knowledge of the roads in the community, their twists and turns, their condition in fall and spring and at what distance from these roads the pupils to be taken to school are living.

The question of transporting children is a difficult one to solve, particularly in this province where the roads are nearly always found twisting and turning through the country. This condition is partially due to natural contour

Some days of the week there was one child attended this school. It will soon close because it is being consolidated.

Gould Model School has a total average attendance of 35 pupils. There are three elementary schools within about three miles which could be brought in to strengthen this school and at the same time provide better education for all pupils concerned

of the land and in many cases is unavoidable.

The roads are not laid off in square sections or at any definite distance from one another. Very often they run out from the villages or towns like the spokes of a wheel, getting farther apart as they extend into the country. Quite often the cross roads are few and far between.

To take children to a central point under such circumstances requires more conveyances than can be profitably employed, for a van must be used on practically every road, because there is no chance to cross over to the next road in order to procure a full load, if there are no more pupils to be gathered on the first.

Another difficulty arises from the fact that the children very often live quite a distance from the main road and have to walk from one quarter to one half a mile to reach the van. Many taxpayers claim it is detrimental to the pupils' health to walk through the deep snow to the road, get into the van and then have all the snow melt on them or else catch cold while being driven to school.

The farmer also objects on account of the bad condition in which the majority of our roads are found in the fall and spring. He fears the vans cannot make their trips on time, that break-downs will occur, and the children become more tired as a result of driving four miles over such roads than they

would if they walked one or two miles. Thus, objection is very often well taken, for the roads, even at the present date, are practically all in a truly terrible state in the spring and fall. It is no wonder the farmer has his "doots".

Another serious difficulty which arises is the question of funds. Quite often the localities which need consolidation the most are the poorest, and there are not a great many rate-payers to provide the increased taxes which are certain to be levied when consolidation is undertaken. In nearly every case a new school house must be built and equipped. As a rule the teacher or teachers in charge of a consolidated school receive in the aggregate as much salary as the total teachers of the district schools concerned. This is due to the fact that in the majority of cases only three small schools can be combined to form a larger school and the money paid in salaries will be as great if not greater than before.

The question of financing consolidations has been solved to some extent by a permanent annual grant instituted by the Department of Public Instruction, Quebec.

This grant is used to encourage school boards to undertake consolidation. It is not an inexhaustible grant but so far has proved equal to the demands made upon it.

A prominent officer of the department says: "So far as general purposes in campaigning are concerned the chief thing is

that there is such a grant although it is not an inexhaustible one. The details of consolidation will have to be worked out each time by the Department because there is a great difference between boards in what they "might" do for themselves as compared with what they "do" do."

Some advantage has been taken of this grant and several consolidations, in fact practically all those which have taken place of late years, are directly due to this assistance.

Information obtained directly from the superintendent of public instruction shows that the consolidations directly due to this grant are as follows:-

St. Andrews, Brill, Hatley, Way's Mills, Compton, Coleraine and Thetford, Shigawake. The consolidation at Bulwer, although undertaken before this special grant was established has largely succeeded because of annual grants being obtained from this fund.

The amount of this grant used annually for this purpose is as follows:-

1914-15.....	$1,377.20
1915-16.....	3,593.60
1916-17.....	3,542.40

The grant given varies in amount according to local circumstances and the needs of the community.

Although there are many places where consolidation is badly needed but cannot be carried out for reasons previously

stated, there are also a number of centres where consolidation is a practical proposition and could be successfully undertaken if the people of these districts could be made to see it was to their advantage.

No person is in closer touch with conditions than the school inspector and his opinion as to those centres in which schools might be united should be of much value.

A circular was sent to the provincial inspectors asking each of them to indicate centres in their districts of inspection at which consolidation of schools might be made and also to give the number of schools which might be linked together at these centres.

The following table (Table IV) shows the names of these centres, the township in which they are located and the number of schools affected. In all, 111 schools are enumerated, which is not a large proportion of the total number of rural schools. This gives further proof that consolidation is in general quite difficult, since our inspectors closely in touch with conditions are unable to recommend consolidation for the majority of rural schools.

TABLE IV.

Inspector.	Centres of Consolidation	Township.	No. of Schools Affected.
J. H. Hunter	Smith's Mills.. ..	Stanstead....	4
	Fitch Bay.....	Stanstead....	5
	Island Brook.....	Newport.....	3
	Martinville.....	Clifton.....	2
O.F.McCutcheon	Gould.....	Lingwick.....	3
	Marsboro.....	Marston.....	3
	Valcartier.....	St. Gabriel East	3
L. Gilman	Huntingdon.....	Godmanchester.	5
	Ormstown.....	St. Malachi..	5
	Franklin.....	Franklin.....	2
	Hemmingford.....	Hemmingford..	3
	Clarenceville.....	St. George...	3
H. A. Honeyman	Danford Lake.....	Aylwin.....	3
	Chelsea.....	South Hull....	3
E. M. Taylor	Granby.....	Granby.....	4
	Sutton Village....	Sutton.....	4
	Abercom.....	,, ...	2
	China School.....	,, ...	4
	Glen Sutton.....	,, ...	4
	Brome.....	Brome.....	3
	Iron Hill.....	,, ...	4

(Table IV continued).

J. M. Sutherland	Styles Corners.....	Metapedia.....	3
W. O. Rothney	Huntingville....	Ascot.....,	3
	Lennoxville.....	Lennoxville....	3
	Richmond.....	Cleveland.....	5
	Kingsey Falls...	Kingsey Falls..	2
	Cherry River....	Oxford.....	2
	Worden.....		2
	Danville.....	Shipton.....	4
	Roxton Pond.....	St. Prudetienne.	2
	South Roxton....	,,	2
	South Stukely...	South Stukely...	2
	Windsor.....	Windsor.....	2
J. W. McOuat	Lachute.....		3
	Grenville.....	Grenville.....	2
	Arundel.....		2
		Total number of schools...	111

The maps in the appendix show the location of all of these centres but two and will give a clear idea as to the situation of those districts where consolidation is practical.

In the pages dealing with this important question an effort has been made to point out the benefits of consolidation, the need of it in our rural districts, the difficulties to be surmounted and the districts in which schools can be consolidated

with the best results and the least difficulty.

It is a serious problem and affects practically the whole province, except some of the communities more thickly populated with english-speaking people such as portions of Huntingdon and Pontiac counties. Upon the solution of this problem depends much of the success which we all so earnestly desire in trying to further the educational facilities of our country boys and girls.

IX. PROPORTION OF COUNTRY CHILDREN IN SUPERIOR SCHOOLS.

A knowledge of the proportion of country children, who after completing their elementary education continue their studies in the superior schools, is most important. This shows whether the rural taxpayer is interested enough to see that his children receive a good education or whether they are compelled to stop school after they have completed the elementary course. It also shows us whether we are justified in introducing the subject of agriculture into the superior schools, for if there are only a few country children attending them it would not be logical or fair to begin such work. The table submitted shows the number of rural pupils as well as village or town children attending twenty-four of our model schools and academies. These figures were obtained in response to a circular asking for such information.

NUMBER OF PUPILS FROM FARMS ATTENDING REPRESENTATIVE ACADEMIES AND MODEL SCHOOLS IN THE PROVINCE. 1915 - 1916.

School	Pupils from town	Pupils from farm.
A. Academies.		
Waterville.....	135	25
Huntingdon.....	98	150 *
Cowansville.....	118	36

(Table continued).

School.	Pupils from town.	Pupils from farm.
Lennoxville.....	145	65
Alymer.....	137	38
Danville.....	60	55
Inverness.....	29	41 *
Lachute.....	119	129 *
Ormstown.....	50	100 *
North Hatley.....	78	12
Sutton.....	87	36
B. Model Schools.		
Gaspe.....	34	25
Bishop's Crossing..	27	35 *
Marbleton.....	17	19 *
Dunham.....	23	27 *
Stanbridge East.....	36	38 *
Compton.....	8	8
New Richmond.....	11	77 *
South Durham.....	14	23 *
Hemmingford.....	16	39 *
Scotstown.....	88	20
Bulwer.....	17	51 *
Gould.....	6	30 *
St. Andrews East....	14	55 *

* More than 50% of the total enrolment is made up of children from farms.

Pupils of Upper Grades in Bury Model School. Over one half of them are from farms.

Pupils of Upper Grades in Dunham Model School. Over one half of them are from farms.

* * * * * * * * * * * *

Why should these pupils not learn agriculture?

It is quite evident from these figures that in a great many of these schools, agricultural instruction could be profitably introduced and a large number of pupils benefitted thereby. Specialized education is being adopted more and more in the latest and most efficient educational systems and it is but right that the boys and girls from farms should receive some training which will cause them to be more likely to take up farming as a vocation. These pupils are, as a rule, encouraged in every way to take either university courses or follow business life, by those in charge of superior education. This policy cannot work to the advantage of our rural districts and eventually to that of the country in general. Every effort should be made, even if a great deal of formal instruction cannot be given, to have those in charge of such schools, inspire our pupils with noble ideals in regard to agricultural life. If this is done many of those who to-day leave the farms for the supposedly superior life of the cities will turn back to the farm and take up their work with contentment and intelligence.

Aylmer Academy --- Country Pupils.

Aylmer Academy --- Town Pupils.

Even in such a large centre as this there are many pupils from the country in the upper grades.

DIVISION B. INVESTIGATION IN ONTARIO.

I. OUTLINE OF DEVELOPMENT OF PRESENT SYSTEM OF AGRICULTURAL INSTRUCTION.

Since the Province of Ontario has made such rapid strides in agricultural education it should prove of interest to know something of the various stages through which the development of the present system has passed.

As far back as 1847 when her first normal school was established at Toronto, agriculture was given an important position in the curriculum. Daily lectures were given in agricultural chemistry and practical experiments were conducted with field crops and fertilizers. In 1870 the first text book on agriculture was published and authorized, being Dr. Ryerson's First Lessons on Agriculture. In 1890 the second text book made its appearance -- Mills & Shaw's Public School Agriculture. The year 1893 saw a great step forward when the first summer school for teachers in the subject of agriculture, with thirty-four teachers attended, was held at Toronto for a period of four weeks. This was only held for two years as the school regulations regarding the teaching of the subject were changed. In 1898 the third text book, an old friend of teachers in this province, appeared. This was James' Agriculture. The next year agriculture was made compulsory in the upper grades of the public schools.

In 1903 the Macdonald Institute was established at the Ontario Agricultural College, one of its purposes being to train teachers in agriculture. At the same time five Macdonald school gardens were started in Carleton County.

In 1904 there was a permanent revival of the summer school for teachers in the subject of agriculture, and in the same year the subject of nature study was introduced into the public school curriculum.

In 1907 the government came to the rescue and provided special grants for schools and teachers carrying on the work of school gardening, and arrangements were made to grant teachers certificates in agriculture.

In 1909 the first normal teachers' class in elementary agriculture and horticulture was renewed at the Ontario Agricultural College. From that time on, there has been rapid development of agricultural school work in that province. In 1911, thirty-three schools qualified for grants for school garden work and a Director of Elementary Agricultural Education was appointed to oversee and promote this work.

In 1912 new regulations made the"teaching of agriculture" the basis for special grants, in place of the school garden work only, and over one hundred schools signified their intention of teaching agriculture. This information (*) shows that great

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*Progress of Agricultural Teaching in Ontario, Bulletin No. 10 (13Q), June, 1914.

progress has been made in agricultural work and the present curriculum of Ontario's public schools contains a fair amount of agricultural instruction.

The movement has broadened in its scope and is regarded to-day as a very important one, with no signs of anything but rapid progress. In 1913 the number of schools taking part in this new work increased to 159 and over $6,000 were spent by the authorities in helping these schools. Still growing by leaps and bounds the number of schools taking up this work had increased in 1914 to 278, with considerable increase in the outlay of money.

II. PLANS OF INSTRUCTION AND CONDITIONS UNDER WHICH GRANTS ARE OBTAINED.

The conditions underlying the giving of these grants have changed somewhat during the last few years but at the present time they stand as follows. * There are two plans of instruction under this system, outlined herewith:-

FIRST PLAN (Home Gardening Plan).

(1) Instruction throughout the whole year to be completed satisfactorily, with requirements regarding pupils' records, teachers' report, trustees' statement, etc. fulfilled.

(2) Supervised home gardens or other similar projects by pupils of three highest grades.

* * * * * * * *

* Ontario Department of Education, Circular 13. Information, Regulations, Instructions and Course of Study in Elementary Agriculture and Horticulture for Rural and Village Public and Separate Schools.

(3) Well kept grass and flower plots, borders, screens, etc. at the school for beautifying grounds and for instructional purposes.

The grants given for conducting the work as outlined above are as follows:

(1) Where the teacher is not in possession of a certificate in agriculture she receives a grant of $8.00, while the school board receives a similar grant, that is to say, they will receive whatever they spend along agricultural lines up to a limit of eight dollars.

(2) Where the teacher has a certificate in agriculture she receives under the above conditions a grant of $20, while the school board is allowed a similar amount as their allowance for such work.

SECOND PLAN (School Gardening Plan).

Conditions (1) and (3) are the same under this plan but two new conditions are introduced. The first new condition is that a well conducted school farm or school garden, at or in connection with the school, having at least six square rods for experimental and observation plots of local use and interest be maintained.

The second new condition demands that for other pupils of the three higher grades not represented in the school garden work in these six square rods, there be either additional plots in the school garden or supervised garden plots or projects at home.

The grants given for conducting the work as outlined above are as follows:-

(1) Where the teacher is not in possession of a certificate in agriculture she receives a grant of $12.00 for the years' work, while the school board receives a similar grant up to this limit for their expenses.

(2) Where the teacher has a certificate in agriculture she receives under the above conditions a grant of $30.00 while the school board is given a limit of a similar amount.

CONDITIONS OF GRANTS.

There are a great many conditions applying to this work but only the most important are outlined.*

(1) Schools intending to undertake this work for the first time or to continue it, and thus qualify for the entire annual grant, must notify the Director of Elementary Agriculture at as early a date aspossible before December 31st, on the form provided for that purpose in the school register. This application must be signed by both Secretary and teacher.

(2) One hour a week at least must be given to the work throughout the entire year and this must be given at a definite time, suitable to the Inspector or Director.

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* Ontario Department of Education, Circular 13.

(3) Throughout the year the teacher must record from week to week on a special form (~~as here attached~~) provided in the school register, the nature and amount of work carried on in the garden and the instruction given in the school. At the end of the year these reports must be forwarded by the teacher as a report to the Minister of Education through the local Inspector. No grants are paid unless these reports are sent in.

(4) The pupils in the classes receiving instruction must keep records systematically in special agricultural note books or garden journals, of the instruction given, and the practical work carried out in their garden. These records must be accessible to the Inspector or field agent on their visit of inspection.

(5) The accounts of money expended on this work must be kept separate from the general school expenditure and a financial statement submitted on a special form provided in the school register by the Secretary to the Minister through the local Inspector. No grants are paid until such report is received.

(6) Any grants given must be used solely for promoting the cause of agriculture and horticulture in the community through the aid of the school.

(7) Unused equipments paid for by these grants and remaining so for two years may be transferred to some other school by the Minister of Education.

III. OUTLINE OF COURSES OF INSTRUCTION FOR TEACHERS QUALIFYING TO TEACH AGRICULTURE.

The Ontario teachers receive a very good course indeed to enable them to carry on their work in the schools undertaking this new subject. There are two main courses given every year at the Ontario Agricultural College. *

I. Teachers who have just finished their normal course come to the Ontario Agricultural College after Easter and take up a ten weeks' course in elementary agriculture and horticulture, under the supervision of competent instructors at that institution. They receive at the end of this course their certificate and are able to teach the subject, run the school gardens or home plots and receive for their pains the grants mentioned above. Suitable allowances for expenses of lodging, board and travelling expenses are made, so that those teachers who really desire to advance themselves along these lines are enabled to do so.

II. In the summer holidays a course of five weeks is held for teachers who are engaged in teaching during the school term and cannot take it at other times. The next season the second five weeks of the course are taken and thus the teacher receives her certificate at the end of the second summer course. These teachers receive allowances for tuition and travelling expenses but they pay $20 for five weeks board at Macdonald Hall.

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* Ontario Dept. of Education. Spring and Summer Courses and Examinations in 1914 for Teachers' Certificates.

The courses areof a very practical nature, this fact being noted from personal observation, since some of the lectures were attended in order to get an idea of the character of the work. The instruction given is very clear with the view of making it simple enough to be efficient without burdening it with too much theory or too many technicalities. Below is given an outline of a lecture given by Prof. Howitt to the spring course, on "Fungus Diseases of the Grains of Ontario."

FUNGUS DISEASES.

Diseases of this nature spread chielfy by spores.

Manner of Spreading:

(1) By the wind.
(2) By water and rain.
(3) By insects.
(4) By birds.
(5) Human agencies.
(6) Seed grain.

(1) Smuts of Wheat.

(a) Stinking Smut or Bunt - commonest and worst - odour like decaying fish makes it easily recognized.

Symptoms of above disease:

(1) Attacked heads are stiff and upright.
(2) Glumes are bleached and distorted.
(3) Grain is short-plump, and light in weight, filled with a dark brown or almost black powder of oily feeling.
(4) Decaying odour.

Life History of Fungus:

Spores are scattered in threshing or handling of the grain and thus adhere to healthy grains. These germinate on grain where sown under suitable conditions for infection.

Method of Prevention:

Formalin Treatment.

(b) Loose Smut of Wheat:

Symptoms:

Attacks and destroys both ovaries and chaff, reducing them to a dark brown powder.

Formalin or bluestone treatment will not prevent this disease and Jensen's modified hot water treatment must be used to control it.

This outline is only given to show that the problems dealt with are practical problems of every day farm life and that the "gist" of the subject in hand is well given.

Detailed accounts of the work covered in the course are given on page 18 of a circular entitled Spring and Summer Courses and Examinations in 1914 for Teachers' Certificates. These details are too long to be included here, but a few of the topics taken up are seen from an inspection of the note books of the students will serve to give some idea of their nature.

(a) Physics (20 lessons)
(1) Soil and weather.

(b) Garden journals.

(c) Horticulture (9 lessons).

(1) Plant propagation from soft cuttings.
(2) Culture of the same.

(d) Chemistry (20 lessons).

(1) Food values of fodders and grains, etc.
(2) Study of soil elements and fertilizers.

(e) Botany (25 lessons).

(1) Fungus diseases of grains.
(2) Study of weeds and weed seeds.
(3) Study of flowers and trees of neighborhood.

(f) Animal Husbandry (10 lessons).

(g) Field Husbandry (20 lessons).

(1) Study of different crops and rotations.
(2) Fertility of the soil.
(3) Crop improvement.

(h) Pomology (8 lessons).

(1) Propagation hardwood cuttings.
(2) Fruit and vegetables.
(3) Use of fertilizers and cover crops.
(4) Influence of climatic conditions.

(i) Dairy Husbandry.

(1) Use of milk testing sheets.
(2) Main essentials in building.
(3) How to establish dairy herds.
(4) Feeding of dairy cows.
(5) Theories of milk production.
(6) Composition of milk and how to test it.

(j) Poultry.

(1) Types, breeds and varieties.
(2) Feeds and feeding.
(3) Egg testing.

Special emphasis is laid on school garden work and every pupil teacher must help to lay out a school garden and then completely care for and operate a plot of her own while she is at the College. Lectures are also given which lay particular stress upon farm life and rural needs, nature study and uses of agricultural literature.

Thanks to the kindness of Mr. S. McCready, B. A., Director of this work in Ontario, an opportunity was given of visiting some of the schools where such work was being carried on.

IV. METHOD ADOPTED OF INSPECTING AGRICULTURAL WORK IN SCHOOLS.

The agricultural inspection is accomplished by special field agents, who are agricultural students of either the second or third year at Guelph. These men are sent around to inspect and report upon the work being done in the schools which are endeavoring to obtain grants. They are supposed to help the teacher in any possible way, to teach lessons in agriculture to the children, confer with the school boards, inspect the school-gardens, and join in agricultural picnics or gatherings where they can obtain a chance either to speak upon the advantages of this new type of work, or else give practical addresses upon some important feature of farm work,

Thanks to the kindness of these gentlemen the writer was able to accompany them while on their annual tour of inspection. In this way over a dozen schools were visited. These were distributed over a large area of country, as the number of schools taking up the work is as yet comparatively small. It was while visiting these schools that the various methods were noted and the results of the teachers' work observed.

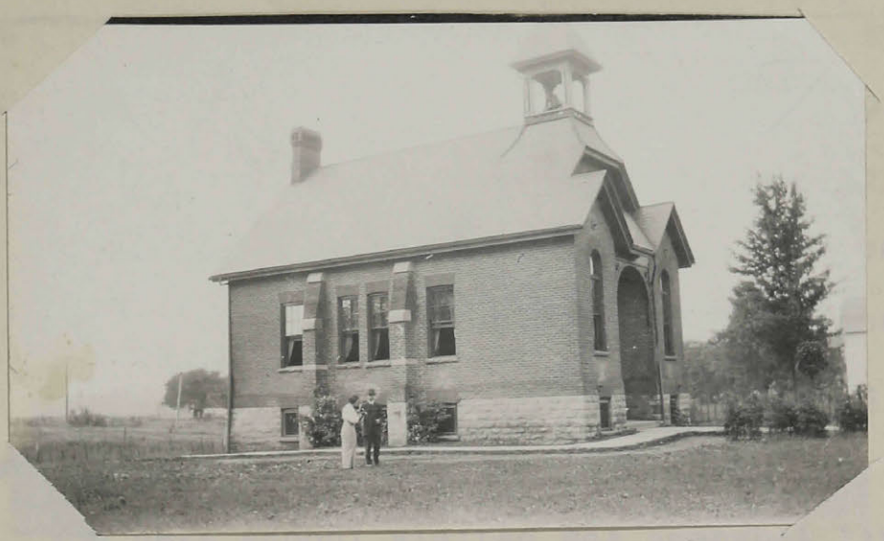
An effort was also made to observe the various features of the garden work, and to ascertain if the lessons taught through them were of value to the child.

V. FEATURES OF THE WORK NOTED WHILE VISITING SCHOOLS.

Below are outlined some of the facts noted at the various schools visited.

The first school visited was at Natchez near Berlin. The building was of very ordinary appearance with the grounds practically unimproved except that there was an abundance of beautiful shade trees. The school garden was small, had been planted late and there were many weeds in evidence. (It certainly was not a very strong example of rural improvement). There was a lack of neatness about the garden which was only six square rods in area, and was almost entirely devoted to flowers; no experimental work was carried on, such as was noted in many of the other schools. The single plot of alfalfa grown was a poor advertisement and might better have been removed.

A lady teacher was in charge, receiving a salary of $725. There were fifty children in the school, all looking bright and happy. There was a library of about 300 volumes containing some books on agriculture and an abundance of bulletins of a similar nature. The teacher was very practical and had done really good work in the school. The pupils had brought the samples of seed corn from their homes and a good germination test had been carried out, thus showing possibility of stand. They had also received different varieties of corn from Guelph and these were being grown at home to ascertain



Another school visited near Chatham. Notice the lighting, cement walks, shrubbery and even curtains. The basement is finished in concrete and contains a furnace. How many of our rural schools have any of these features?

A school of a somewhat older type. Not so convenient or modern but quite comfortable. It has large shady grounds and a school garden.

their various yields under local conditions. Lessons on weed determination had been given and most of the pupils were quite familiar with the ordinary weeds as was proved by giving them a test. Fertilizer experiments were also being carried out at home. This accounts partially for the smallness of the school garden. Although there were many weaknesses in the work, one felt that much good was being accomplished.

The next school visited was somewhat like the first as regards buildings, grounds and shade. Inside, the school was in rather poor condition and the children were of a poorer class. This school had 44 pupils on the roll and the lady teacher received $625. It was interesting to note that this district alone had an assessment value of $202,000 and received outside assistance to the extent of $400. This shows the high valuation attained when a community of people, owning valuable land, are all paying into one treasury for their educational facilities. It is no wonder that fairly high salaries can be paid under such circumstances.

There was about a quarter-acre in the garden and experimental work was strongly in evidence. There was a section devoted to variety work in grains and vegetables while a plot showed advantages of inoculating alfalfa. A demonstration plot of flax was also seen. The alfalfa plot was simply splendid and was enough to make any farmer seeing it want to grow it. The garden was very well tilled and in a beautiful state of growth. Above all, the children were keenly interested and had a good knowledge of <u>why</u> the work was being done.

The next school to be visited which had any interesting

features attached to its work was at Hawkesville. This was one of the best schools visited, and this was so because it had one of the best teachers. This factor is, after all, the deciding one in this work. It is not so much what the teacher knows but her personality and what she does with what she knows. She requires energy, initiative, and above all, courage and aggressiveness.

This school was an attractive, up-to-date building, well-lighted, well planned and roomy. It had a teacher's room on one side, while the school room itself was well equipped with pictures, books and modern seating. There were boxes of flowers in the windows, as well as potted plants. Forty-seven children attended the school and all looked happy and contented. The school garden was of the best type, being 66 x 52 feet in size. There were twenty-five individual plots and in addition there was a number of experimental plots. In this way each child carried out individual work, while the other plots held experiments of general interest not only to the scholars but also to the people of the neighborhood.

Three experimental plots provided a test of three varieties of oats for best production, these three being as follows:

(1) Banner oats of farmer's growing.

(2) O. A. C. No. 72 (from Guelph).

(3) Siberian oats, hand selected from school plot the previous year.

Pupils of Kent Bridge school, Ontario.

Picture taken while they were out working in the garden.

Pupils of an Elgin County school, Ontario, training themselves for a useful future.

Pupils of No. 9 School, Camden Township, Kent Co., Ont., in their garden.

Another experiment showed the influence of dates of seeding both as regards yield and presence of rust. Variety tests of different vegetables were also being carried out. There was a fertilizer plot and also a good forestry plot, the latter containing different types of trees obtained from the college at Guelph for that purpose. In addition to this, some of the pupils had experimental plots at home.

There was a fine tool house, well filled with tools and containing a good lawn mower. Every effort was being made to improve the grounds for an Arbor Day had been held, shrubs and vines (also obtained from Guelph) being used to decorate the grounds. A school fair had been held with great success. The teacher had the respect and admiration of all her pupils and they showed a very lively and intelligent interest in all the work of the garden and school room.

It should be stated here that some of the schools visited were very, very weak in their school garden work, and that there might better never have been a garden than that anyone in the neighborhood should see what was supposed to be one. This type of work is what keeps back the progress of the movement. There is always a great deal of opposition to the new study in any case until it has been tried and found to be efficient and practical. Then all will admit its usefulness and become enthusiastic in upholding its merits. When, however, a garden proves a failure it becomes the laughing stock of the neighborhood,

Pupils of Galetta School, Ontario, working in the school garden. Note the fine garden, the large grounds and the neat tool-house in the rear.

Some little girls of Christie Lake school, Perth, Ont., enjoying the beauties of the school garden. How much better fitted for life children with such opportunities must be.

especially of those farmers who are the scoffers at any forward movement.

There is no value in discussing in detail the reasons for these failures, but in some cases they could easily have been avoided. Absolute carelessness caused some of them while in others it was a lack of energy on the part of teacher, pupils and parents combined. Some schools and their agricultural work gave one the opinion that the garden was only planted to get the money for the teacher and the school board, and that any leatures given in the school were handled in the same spirit. Note books in schools such as these were either non-existent or else a reflection on the teacher and the pupils. The pupils knew next to nothing on being questioned and the teacher seemed at sea. Indeed one felt like leaving these schools as soon as possible and seeking another one of the better type.

In other schools, of course, the garden was a failure owing to no fault of the teacher or her pupils, but when this was the case the lecture work still showed to good advantage.

A description of a few more of the good schools will perhaps help to dispel the discouragement caused by reading the above.

A particularly good school was visited at Orwell, not far from St. Thomas. The teacher was enthusiastic and of good personality. (This is always the case), She had been in charge for five years and had brought the school garden

Mandaumin rural elementary school near Sarnia, Ont. Visited while on tour of inspection. It is doubtful if there is a school in this province its equal in comfort and appearance.

Another view of the same school. Note the school garden, flowers, shrubs and good lighting facilities. There are many schools equal to this in Ontario.

and the agricultural work through all the struggles of pioneer days--discouragement, opposition and unbelief. The school had finely shaded grounds in front, the garden being in the rear of the school and containing about a quarter-acre of tilled land. At one side stood a tool house containing most of the essential tools, and even having muslin curtains on the windows. It was one of the most varied gardens visited. There was a plot of perennial flowers in good condition, a plot of strawberries and one of raspberries, and besides, plots containing all the common vegetables. There was a border of fire bush around the outside and other flowers had been transplanted to decorate the garden. There were no individual plots in this school. It was "Our Garden", and everybody was supposed to help in caring for it. One would suppose that this would lead to neglect but it was not so in this case. A garden committee was appointed and every child had certain duties. One or two kept the paths clean, others mowed the lawn, while their mates hoed the potatoes or watered the flowers. This list was posted in the tool house and those who neglected their duty were soon reminded of it by their more industrious school mates. Better still, this same committee held office during the holidays. In this way the garden did not suffer from neglect and the pupils' interest was maintained from one session to another. It is well known that one of the biggest disadvantages of school gardens is the fact that they are neglected in a great many cases throughout

the summer. It is likely in large centres to degenerate into a janitor's job, while in the country it is likely to degenerate into a bed of weeds, and become an eyesore to the community.

In this school the pupils had really good note-books, a feature not found in many of the schools. Some of the things mentioned and noted in these books were as follows:

Weather observations
Plan of garden
Garden notes (day by day)
Notes on dairy and beef cattle
Notes on milk
Spraying of trees
Study of the house fly
How to grow a grape vine
Study of common weeds
Birds and their uses
How to make a hot bed
Flint and dent corn
Study of wheat
Study of wheat diseases
Benefits of early seeding
Seed control act
Facts about bees
How to plant trees
Weather records
Study of the common pump.

It can be seen from the list of topics studied that the pupil is bound to receive a lot of useful information from his teacher. What good manners were noticed and polite answers were received in this school! What eagerness the children showed in explaining the reason for their work! What a pleasure it was to hear the teacher discuss the possibilities of the work in hand! One truly felt on leaving that if only a dozen schools in this province could reach such a

happy state, it would be worth many months' hard struggle to see it brought about.

It is not necessary to enlarge and comment upon every visit made, but one more instance might be cited. This school was situated near Chatham on beautiful grounds, well shaded and well kept. The building itself was beautiful so far as country schools go, being built of brick, beautifully finished inside and having a basement in which was a furnace. The equipment was modern, there was a library and a really good piano. The teacher was pleasant and courteous - the children the same. The garden was in grand condition and was a treat to behold. Weeds which had been gathered along the road while coming to the school were placed on the table and the children were required to name them. To the surprise of all a girl named the most correctly and received the prize. A still further surprise provided was the fact that this teacher was doing all this good work <u>without</u> one of the certificates obtainable at Guelph, a second tribute to the theory advanced before that it is not so much what the teacher knows as what she does with what she knows.

Still other schools were visited, having very good gardens, good note books, and beautiful school buildings, with shrubbery, vines and window boxes decorating their exterior. At nearly all these schools a short talk was given by the writer while the field agent made out his reports or looked over the

note books. In this way an idea of what the children knew and the lines they were working along was obtained. It was claimed by the agents who furnished the privilege of visiting these schools that there were many other schools still better instructed than those visited. This being the case the work is fast becoming an important feature of education in Ontario. It is not a fad or it would have passed out of existence long ago as all fads or unnecessary features are bound to do in our ordinary rural schools.

The one great fact ascertained concerning this particular feature of investigation was that the best buildings, the most polite and intelligent pupils, the neatest and best kept grounds, the best teachers, and the best school work, were all found where the agricultural work was best and the school garden efficiently run. This alone makes the work worthy of most serious consideration, and every care should be taken to see that something along similar lines, or at least tending to similar ends should be undertaken in the Province of Quebec. The lesson to be learned from visits to schools of the poorer type is that work of this nature should only be undertaken where proper arrangements can be made to carry it out efficiently.

For this reason it is felt that the beginning of a school garden propaganda would be better delayed in this province in the smaller schools especially, until teachers who have been trained especially to carry on this work are available.

Something might be done, however, even at present, to

Rittenhouse School, Vineland, Ont. One of the prettiest spots in the Province.

forward this type of work by the use of the home plot system such as is followed by many of the schools in Ontario.

This will encourage the children to carryon experimental work and at the same time furnish much information to the farmers as to the relative values of the crops with which their boys and girls are experimenting.

Another feature of the work in Ontario which is proving very valuable is that of school fairs. No exhibitions were being held while the writer was in Ontario, but there can be no doubt from what the teachers and field agents stated that they prove a great stimulus to the teaching of agriculture. This type of work is especially strong in Kent County where very large fairs in which a large number of schools take part are held.

One of the things to be avoided in holding such fairs is that of having too many schools take part at any given fair. This was the opinion of some of the teachers interviewed.

They stated that a small fair had advantages not found in the larger ones. In the larger fair the competition takes place between so many schools that a very small proportion of the children exhibiting receive prizes. Again, the spirit of competition is lessened since so many of the children exhibiting are strangers to one another.

The small fair encourages a better community feeling and brings the people of the locality together in a spirit of friendly rivalry.

The schools' division of the Ontario Experimental Union is one which embraces many useful features. It was formed in 1909 with the object of furnishing the schools of Ontario with planting material suitable for simple experiments and demonstrations either in school gardens or in pupils' home gardens. Through this organization it is hoped to bring the work of the Ontario Agricultural College and the results of the Experimental Farm into living and practical touch with all rural schools of the province.

Varieties of grains, corn, vegetables and small fruits which have given good results at Guelph are given to the children and they are expected to try them experimentally either at home or in the school garden. In this way it is possible to find out what varieties will do well in certain localities and also to improve the crops in the neighborhood.

Pupils receiving such seed are expected to make a report on it at the close of the season. The experiences and results of the pupils' work on the plots are often used to give an agricultural tendency to the work of the school. Compositions are written, based on this work and problems in arithmetic also worked out from data gathered during the summer.

In many instances the boys and girls are formed into a club which meets from time to time to hear the experiences and results obtained by different members. These organizations are very often known as Progress Clubs.

It is from the work of these clubs that most of the schools fairs held in Ontario have had their beginning. Bulletins and pamphlets containing definite help and instructions are issued from time to time bringing the work prominently before the teachers and pupils. Since this experimental work is done in direct co-operation with the Ontario department of education the chances of success are much greater than if the scheme were being worked out as an independent one. On pages 22-23 of this thesis is found a list of the publications sent out by the Ontario Department of Education to help teachers and pupils in such work. The publication of such large amounts of agricultural literature and its thorough distribution in all schools is one of the features which has made the work in Ontario so successful. Large quantities of this literature were found in all schools v visited and a great deal of it was being used to advantage.

Further information as to the work of the Experimental Union may be found in a bulletin entitled "Schools' Division, Ontario Experimental Union, 1914."

One of the noteworthy features of all the work carried on, is that it appears to be centralized, concentrated and systematic. Those in charge are in very close touch with pupils and teachers, also with the educational department. A whole-hearted effort onnthe part of those in charge has inspired the teachers to do their best. The pupils are interested

and progressive.

Well organized summer schools, frequent visits from agricultural agents and district representatives, an abundant supply of helpful literature, and small grants to teachers, are the four most important factors which have made the work in Ontario so successful.

This work is producing more efficient schools, happier and more contented children, more beautiful school grounds, and general interest in matters agricultural.

Those who have charge of such work in this province will do well in so far as local conditions admit, to avail themselves of many of the features which helped to make the work in Ontario such a success.

DIVISION C.

RECOMMENDATIONS AND SUGGESTIONS AS TO THE BEST METHODS OF IMPROVING AGRICULTURAL INSTRUCTION IN THE PROVINCE OF QUEBEC.

(1) That the public be educated to favor such instruction by meeting and conferring with them at public meetings where the benefits of the various valuable features of such work would be discussed frankly and clearly.

(2) That at these meetings, those in charge of such work should bring before the people all the offers of assistance which our various educational authorities are prepared to make in order to help in furthering such work.

(3) That an improvement in school grounds be procured by improving, along lines such as outlined in this thesis, one representative ground, centrally situated, in at least some of the municipalities.

(4) That, to accomplish this, the college provide a man, with an intimate knowlwdge of landscape work, who will be prepared to visit such districts and co-operate with the school board in carrying out such improvements.

(5) That in view of conditions mentioned in connection with school grounds, and agricultural instruction in rural schools, school gardens should be established with caution and only in selected districts where the grounds are suitable, the teachers capable, and public interest manifest.

(6) That school fairs, in which the "home plot" system is employed, be established in as many centres as possible, this

being one of the best means of stimulating public interest because of their wide scope.

(7) That a persistent effort be made to establish school libraries, especially in those selected districts where sample grounds and gardens are established.

(8) That the teachers, pupils, and the public from other districts in the municipality be given free access from day to day to the library, when this central school is not in session.

(9) That Macdonald College confer with the Department of Public Instruction in order to secure the authorization of a suitable list of reference library books on agriculture.

(10) That, in addition, a number of travelling libraries be established by Macdonald College and sent out to various distric in which extension work is being carried on by demonstration.

(11) That on the report of the demonstrator, or some other constituted authority, a bonus for excellence in agricultural instruction be given to those teachers who undertake and successfully carry out such work.

(12) That graduates in agriculture, who hold a model diploma, be engaged as principals in rural model schools, and in rural consolidated schools.

(13) That these men be employed in a dual capacity (a) by the school board as principal, and (b) by Macdonald College, in part as representative, devoting the major portion of their time to school work, and the minor portion (about one-tenth or half a day per week) to supervise agricultural instruction in the

surrounding rural schools. In this way, by receiving two incomes, good men could be placed in all sections of the provinee that would otherwise be neglected.

(14) That such men be engaged also as assistant masters in our larger model schools and academies, with relations to the rural schools similar to those suggested in the preceding paragraph.

(15) That our demonstrators and others engaged in extension work be employed during the winter months to give a series of short courses to farmers' sons, who are in attendance at our model schools and academies.

(16) That in the meantime, aspreparatory work, every teacher be assisted as much as possible to carry on the work of instruction contained in the authorized course of study. In this way much good will be accomplished by acquainting the pupils with the primary principles of the subject, thus enabling them to more fully appreciate the more advanced work when it becomes possible to introduce it.

(17) That, in addition to the regular summer school in agriculture, now held annually at Macdonald College, additional short courses, lasting for one week, be held at such centres as Aylmer, Lachute, Huntingdon, Knowlton and Lennoxville during the holiday months. This policy would enable many teachers who are unable to attend the longer course to acquire some elementary agricultur at a point near to their homes.

(18) That the teachers in training at Macdonald College receive as much nature study and agriculture as possible during their course, and that special instruction be given those teachers who intend to teach in rural schools.

CONCLUSION.

The field of investigation has been large and the featu to be studied numerous. Conditions have not been studied as intimately as they should be, nor possibly the correct remedies for existing conditions suggested, but it is hoped that the information herein contained will produce action of a helpful nature by those who are in a position to provide it.

Existing conditions are bad but they might be a great deal worse. It is not yet too late to produce great improvement if we take immediate steps to rectify matters. Besides, the boys and girls of our schools, the pupils who will some day be the farmers of this province and thus the backbone of the country are at that stage in their life when we may mould their lives almost according to our will. The country child is of a superior type and if we would change conditions for the better let us work with them and for them.

Much preliminary work must be done before the dawn of better days will be seen, and much progress be made in the more advanced features of the work. Agricultural work in our school stands to-day where it stood many years ago in some of our other provinces, and we can only hope to reach the heights of success reached by the Province of Ontario by untiring and patient effor

Let us them, inspired by their achievements and the noble example of our leader in the work, Sir William Macdonald, make every effort to press forward until "Mastery for Service" becomes the motto of our farmers and our province enjoys the benefits of agricultural education.

"Besides, the boys and girls of our schools, the pupils who will some day be the farmers of this province and thus the backbone of the country, are at that stage in their life when we may mold their lives almost according to our will."

ACKNOWLEDGEMENTS.

The thanks of the writer are due to all who helped to make the season's investigation such a pleasant one. There were many difficulties to overcome, some due to the inexperience of the investigator. These were smoothed over to a great extent by many of the gentlemen visited and interviewed.

Special thanks must be rendered, Mr. S. B. McCready, B. A., Director of Elementary Agriculture and Horticulture in the schools of Ontario, for the great assistance rendered in making an inspection of some of the schools possible, in furnishing much desired information, and in giving the writer the freedom of the college while visiting it. Hearty thanks are also due Mr. J. E. McLarty and Mr. Roy Abraham, the two field agents with whom the tour of inspection was made, for their genial company and their valuable advice.

The investigation of conditions in this province was made much more pleasant owing to the courteous manner in which the gentlemen interviewed replied to all questions, and the helpful advice which many of them gave. Special thanks in this regard is due the Hon. Sydney Fisher of Knowlton, for his hospitality and many helpful suggestions.

Sincere thanks must be given the protestant school inspectors of the province for much information received from

them and from which some of the tables submitted have been compiled. Thanks are also due the secretaries, chairmen and other school officials for information received.

The cordial relations existing between the writer and the college during the period of investigation and the paind taken by Principal F. C. Harrison, D. Sc., and the registrar, Mr. W. Wright, to aid in any possible way the work in hand, are especially appreciated.

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APPENDIX.

The following section contains --

I. Three maps of different parts of the province which are used to show:-

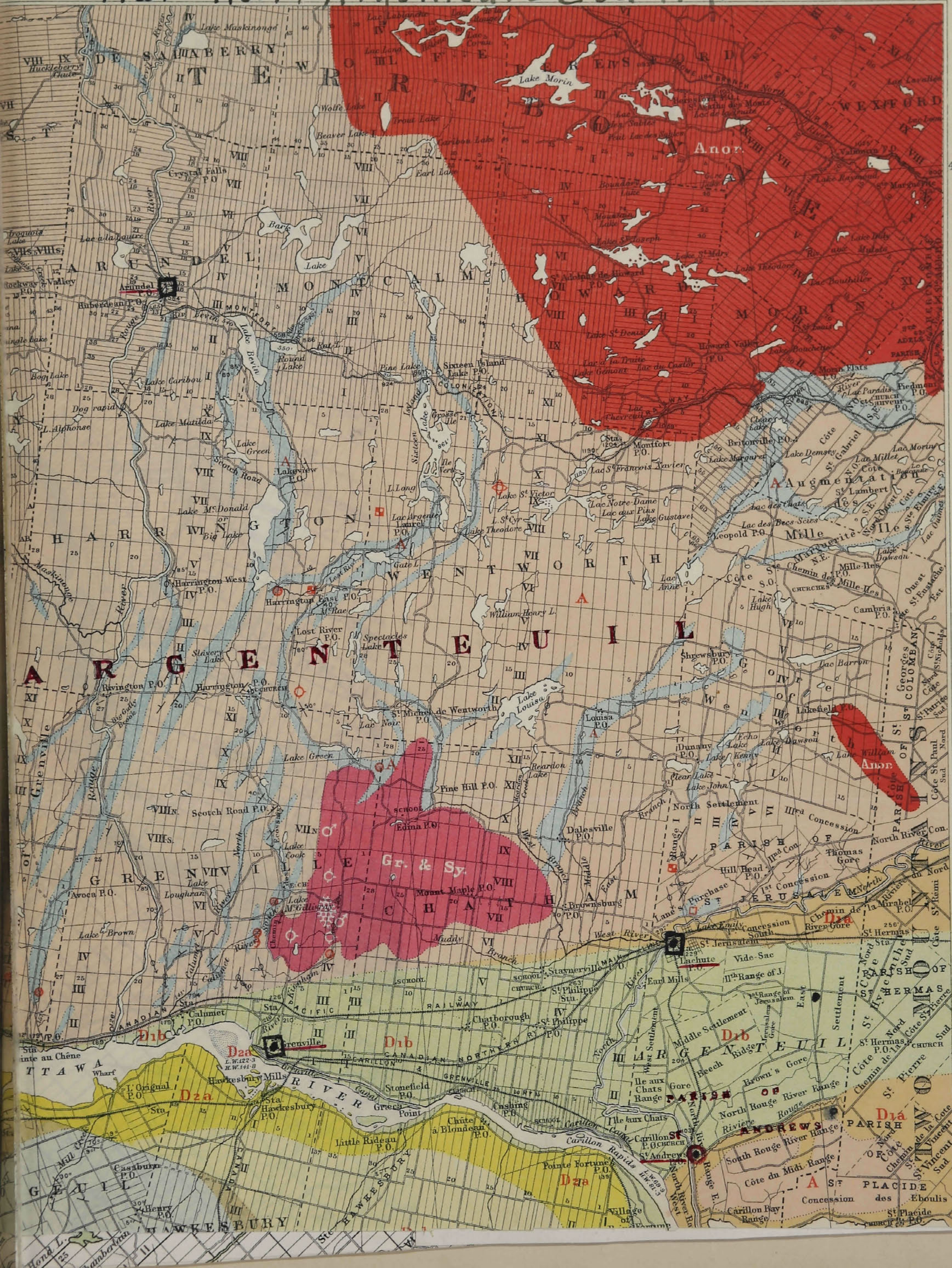
1. Centres of consolidation recommended by inspectors.
2. Places or schools visited while carrying on investigation.
3. Centres in which consolidated schools now exist.

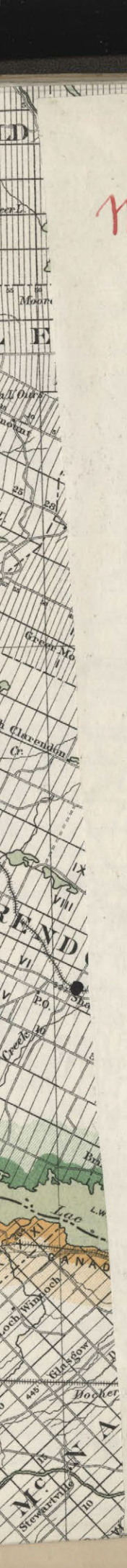
Note:- The key to these maps is as follows:-

1. Centres for consolidation.....
2. Places or schools visited while investigating..
3. Centres where there are consolidated schools...

II. Pictures of different types of schools found in the province.

Map No. 1. Argenteuil County.

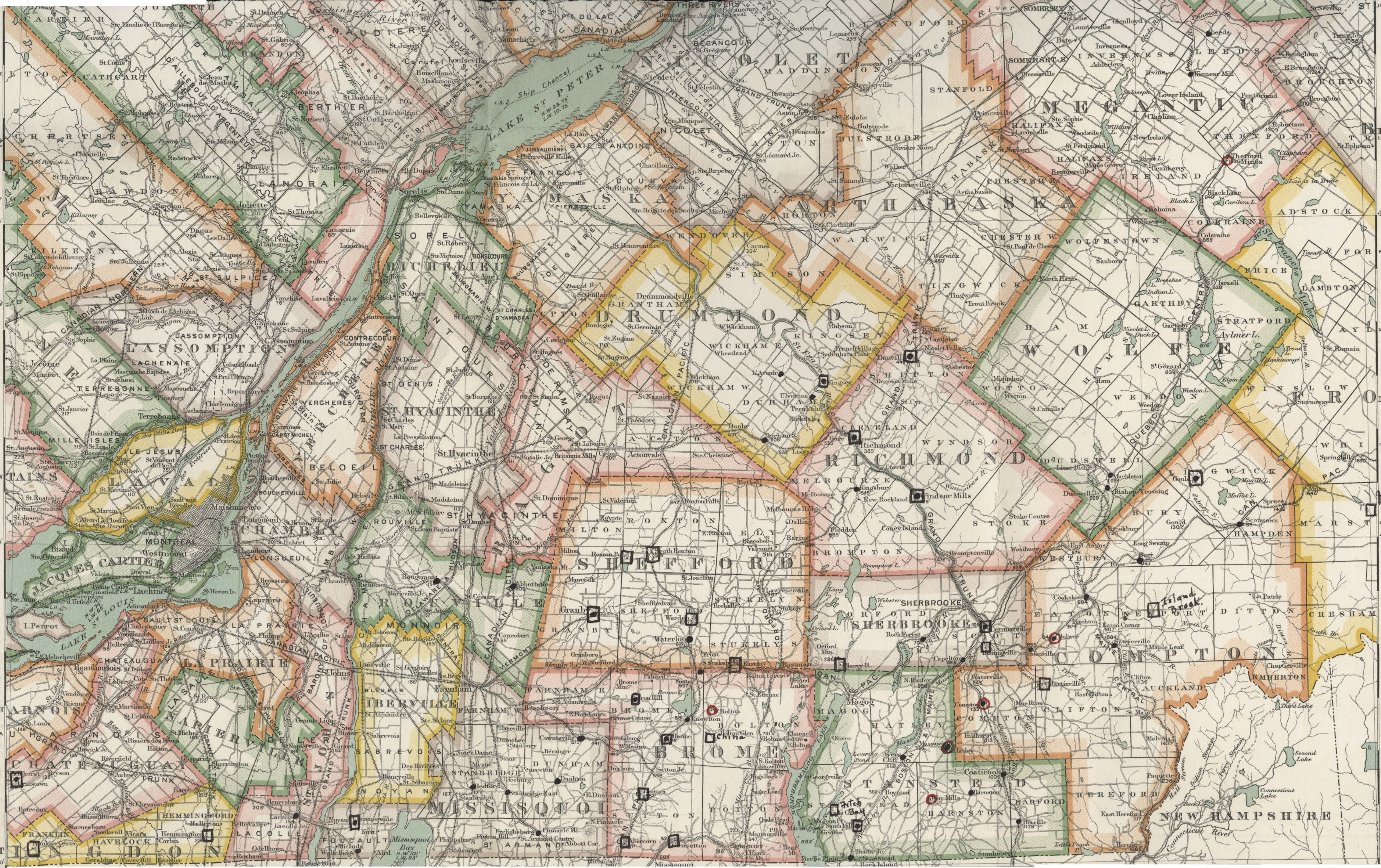




Map No. 3.
Pontiac and Wright
Counties.

HUDDERSFIELD
CLAPHAM
ALLEYN
AYLWIN
HINCKS
LESLIE
CAWOOD
LITCHFIELD
THORNE
DENHOLM
LOW
ALDFIELD
CLARENDON
BRISTOL
ONSLOW
MASHAM
WAKEFIELD
EARDLEY
HULL
HORTON
TORBOLTON
McNAB
GRAND CANADIAN PACIFIC

Map No. 2 Eastern Townships



THREE RIVERS
LAKE ST PETER
NICOLET
YAMASKA
ARTHABASKA
MEGANTIC
WOLFE
DRUMMOND
RICHMOND
SHERBROOKE
COMPTON
STANSTEAD
BROME
SHEFFORD
MISSISQUOI
IBERVILLE
ST JOHNS
NAPIERVILLE
LAPRAIRIE
CHATEAUGUAY
HUNTINGDON
CHAMBLY
VERCHERES
RICHELIEU
BAGOT
ROUVILLE
ST HYACINTHE
LAVAL
JACQUES CARTIER
MONTREAL
TERREBONNE
LASSOMPTION
BERTHIER
JOLIETTE
MASKINONGE
NEW HAMPSHIRE
SORELL
GRAND TRUNK
CANADIAN PACIFIC
Ship Channel

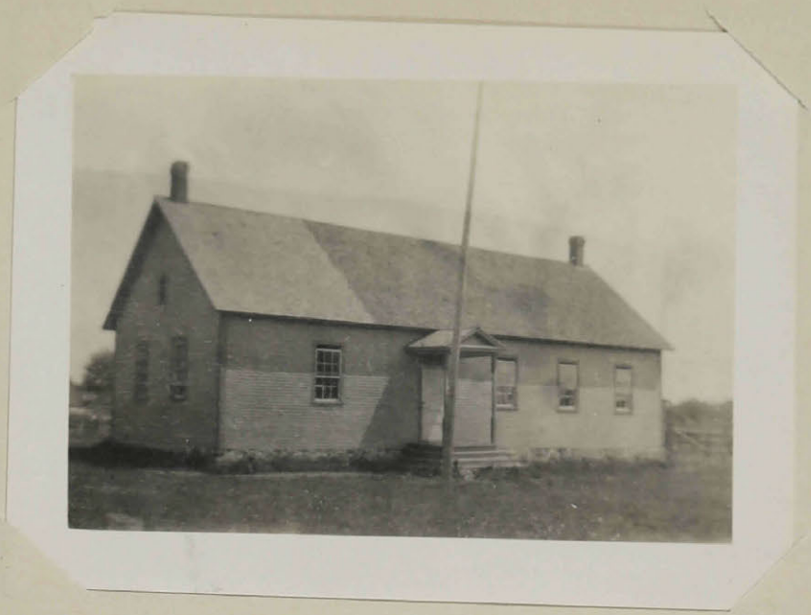
ntingdon.

Three elementary schools in this province. They show the type of building generally erected in the country districts, bare, unadorned and inartistic. The surroundings are also very much in need of attention.

Scotstown Model School.

Kingsbury Model School.

Note that the same severe inartistic lines are also used in building many superior schools.



Durham Model School.

Dixville Model School.

Note the lack of any improvement in outside surroundings.

Kinnear's Mills Model School.

Kingsey Consolidated School.

Waterloo Academy. A credit to the people who built it. Most of the academies are not so substantial or as well-built as this school.

Bury Model School. A school built in a very fine position and from which a beautiful view can be obtained. The interior finishings are above the ordinary and the pupils of the school are quite happy in such quarters.